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EXAMINER	
JARRETT, SCOTT L	

ART UNIT	PAPER NUMBER
3623	

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/945,193	SUERMONDT ET AL.	
	Examiner	Art Unit	
	Scott L. Jarrett	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This **Final** office action is responsive to Applicant's amendment filed January 31, 2006. Applicant's amendment amended claims 1-21 and added new claims 22-27. Currently Claims 1-27 are pending.

Response to Amendment

2. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.

The objection to the Title is withdrawn in response to Applicant's amendment to the Title.

The 35 U.S.C. 101 rejection of Claims 1-16 is withdrawn.

It is noted that the applicant did not challenge the officially noticed facts cited in the previous office action(s) therefore those statements as presented are herein after prior art. Specifically it has been established that it was old and well known in the art at the time of the invention:

- to automate a manual method/process;

- to track parts through all stages (statuses, availability, etc.) of the parts (materials, components, items, kits, etc.) life cycle wherein the tracking provides a plurality of information that enables businesses to do such things as improve the system's ability to estimate (determine, predict, forecast, etc.) stocking/inventory levels;

- to utilize averages to represent/generalize numbers and/or using averages when individual/specific data is unavailable;

- to utilize performance evaluations to identify and implement training for employees (staff, personnel, etc.) wherein the evaluations assist in the selection and/or development of training to address identified areas requiring improvement;

- to identify/flag information that the business/system deems important (relevant, necessary, required, etc.) for users to consider (review, view, etc.); and

- to carry/transport service parts (tools, kits, items, components, supplies, materials, etc.) utilizing a repair vehicle (can, van, truck, etc.) wherein the vehicle(s) provides a convenient method for transporting the technician to/from the repair site.

Response to Arguments

3. Applicant's arguments with respect to claims 1-27 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 4-9 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Mamer et al., Job Completion Based Inventory Systems: Optimal Policies For Repair Kits and Spare Machines (1985).

Regarding Claim 1 Mamer et al. teach a method for predicting parts needed for a repair comprising:

- determining an expected waste (cost, penalty, back order, loss demand, stock-out, broken job, excess, part fill rate, etc.) for a set of parts (kit) of a product that maybe replaced during a repair of the product in response to a repair history for the product (Paragraphs 1-5, Page 706; Equations 2.5-2.6; Tables 1-2; Figures 2-3); and

- determining the parts having a lowest expected waste (i.e. optimal kit; Paragraphs 2-6, Page 706; Paragraph 1, Page 707; Equation 2.6).

Regarding Claims 4-5 Mamer et al. teach a method for predicting repair parts wherein an expected waste further comprises determining an expected waste, which is caused by unnecessarily sending and/or not sending a part to a repair site (i.e. holding cost, probably/fraction job needed part, parts requested/demanded; the optimal kit being

a trade-off/balance between the costs associated with the repair (broken job, backorder, loss demand, etc.) and the job completion rate; Last Paragraph, Page 704; Paragraphs 1-6, Page 706; Paragraph 1, Page 707; Equation 2.6)

Regarding Claim 6 Mamer et al. teach a method for predicting repair parts wherein determining an expected waste further comprises analyzing the repair history of the product (Paragraphs 1-5, Page 706; Tables 1-2).

Regarding Claim 7 Mamer et al. teach a method for predicting repair parts wherein analyzing the repair history further comprises determining a number of times each part was under-predicted, over-predicted and correctly predicted (parts usage, fraction part needed for each job type, part usage probabilities, backorder, loss demand, etc.; Last Paragraph, Page 704; Paragraph 1, and Last Two Paragraphs, Page 705; Paragraphs 1-3, Page 706; Tables 1-2; Figures 2-3).

Regarding Claims 8-9 Mamer et al. teach a method and system for predicting repair parts wherein determining an expected waste further comprises combing and determining number of times each part was under/over-predicted with a cost associated with under/over-predicting parts (Paragraphs 1-5, page 705; Equations 2.2, 2.6).

Regarding Claim 11 Mamer et al. teach a method for predicting repair parts wherein determining the parts further comprises selecting the parts to be sent on an on-

site repair (optimal repair kit, field kit, field repair, etc.; Abstract; Last Paragraph, Page 703; Paragraphs 2-4, page 716).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mamer et al., Job Completion Based Inventory Systems: Optimal Policies For Repair Kits and Spare Machines (1985) as applied to claims 1, 4-9 and 11 above and further in view of official notice.

Regarding Claim 10 Mamer et al. teach a method for predicting the parts needed for a repair wherein a plurality of costs are taken into account when determining an optimal repair kit (set of parts, tools, etc.; cost per kit, number of kits, average number of repairs per kit, tool cost, spare cost, demand loss, etc.; Paragraphs 1-2, Page 705; Table 1; Figures 2-3).

Mamer et al. does not expressly teach that one of the costs further comprises an average cost as claimed.

Official notice is taken that utilizing averages to represent/generalize numbers and/or using averages when individual/specific data is unavailable is old and well known in the art.

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting/optimizing the parts needed for a repair, with its ability to associate and determine costs for each part in each technician's inventory, as taught by Mamer et al. would have benefited from utilizing average costs in view of the teachings of official notice; the resultant system using average costs to predict/optimize parts needed for a repair thereby simplifying the calculations that need to be made and/or reducing the amount of information required to be maintained by not requiring the user/business to track (associate, determine, etc.) costs for each part inventoried by each technician.

8. Claims 17, 19-23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mamer et al., Job Completion Based Inventory Systems: Optimal Policies For Repair Kits and Spare Machines (1985).

Regarding Claim 17 Mamer et al. teach a method for predicting parts needed for a repair comprising:

- determining an expected waste (cost, penalty, back order, loss demand, stock-out, broken job, excess, part fill rate, etc.) for a set of parts (kit) of a product that maybe replaced during a repair of the product in response to a repair history for the product (Paragraphs 1-5, Page 706; Equations 2.5-2.6; Tables 1-2; Figures 2-3); and

- determining the parts having a lowest expected waste (i.e. optimal kit; Paragraphs 2-6, Page 706; Paragraph 1, Page 707; Equation 2.6).

Mamer et al. does not expressly teach an apparatus (system, computer) for implementing the method for predicting/optimizing the parts necessary for a repair as claimed.

Official notice is taken that automating a manual method/process is old and very well known. Further it was known at the time of the invention that merely providing an automatic means to replace a manual activity which accomplishes the same result is not sufficient to distinguish over the prior art, In re Venner, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958). For example, simply automating the steps of predicting/optimizing

the parts needed for a repair gives you just what you would expect from the manual step as shown in Mamer et al. In other words there is no enhancement found in the claimed apparatus. The claimed apparatus for predicting the parts needed for a repair only provides automation for the manual activity. The end result is the same as compared to the manual method. A computer can simply iterate the steps faster. The result is the same.

It would have been obvious to one skilled in the art at the time of the invention that the method for optimizing/predicting the parts needed for a repair as taught by Mamer et al. would have benefited from being automated in view of the teachings of official notice; the resultant system providing the well known benefits of automation.

Regarding Claim 19 Mamer et al. teach a method for predicting repair parts wherein determining an expected waste further comprises analyzing the repair history of the product (Paragraphs 1-5, Page 706; Tables 1-2).

Regarding Claims 20 and 23 Mamer et al. teach a method for predicting repair parts wherein analyzing the repair history further comprises determining a number of times each part was under-predicted, over-predicted and correctly predicted (parts usage, fraction part needed for each job type, part usage probabilities, backorder, loss demand, etc.; Last Paragraph, Page 704; Paragraph 1, and Last Two Paragraphs, Page 705; Paragraphs 1-3, Page 706; Tables 1-2; Figures 2-3).

Regarding Claims 21 and 26 Mamer et al. teach a method for predicting repair parts wherein determining an expected waste further comprises combing and determining number of times each part was under/over-predicted with a cost associated with under/over-predicting parts (Paragraphs 1-5, page 705; Equations 2.2, 2.6).

Regarding Claims 22 and 27 Mamer et al. teach a method for predicting parts needed for a repair comprising:

- repair history that includes information pertaining to a set of parts used in a set of prior onsite repairs (Paragraphs 1-5, Page 706; Tables 1-2);

- cost data that includes a set of costs associated with predicting the parts used in the repair (Last Paragraph, Page 704; Paragraphs 1-5, Page 705; Equations 2.2, 2.6; Figures 2-3);

- determining a waste metric (value, parameter, data, etc.) for each part in response to the repair history and cost data such that the waste metric enables a selection of parts/set of parts having a lowest expected waste for the repair (Paragraphs 1-4 and Last Paragraph, Page 707; Paragraphs 1-5, Page 711; Table 1; Equation 2.6).

Mamer et al. does not expressly teach an apparatus (system, computer) for implementing the method for predicting/optimizing the parts necessary for a repair as claimed.

Official notice is taken that automating a manual method/process is old and very well known. Further it was known at the time of the invention that merely providing an automatic means to replace a manual activity which accomplishes the same result is not sufficient to distinguish over the prior art, In re Venner, 262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958). For example, simply automating the steps of predicting/optimizing the parts needed for a repair gives you just what you would expect from the manual step as shown in Mamer et al. In other words there is no enhancement found in the claimed apparatus. The claimed apparatus for predicting the parts needed for a repair only provides automation for the manual activity. The end result is the same as compared to the manual method. A computer can simply iterate the steps faster. The result is the same.

It would have been obvious to one skilled in the art at the time of the invention that the method for optimizing/predicting the parts needed for a repair as taught by Mamer et al. would have benefited from being automated in view of the teachings of official notice; the resultant system providing the well known benefits of automation.

Regarding Claim 25 Mamer et al. teach a method for predicting repair parts wherein the repair history further comprises an identification of the parts sent to repair sites in the prior onsite repairs and a list of actual parts needed (used) in the prior onsite repairs (Last Two Paragraphs, Page 710; Paragraphs 1-5, Page 711; Section 7, Pages 716-717; Last Paragraph, Page 717).

9. Claims 2-3, 12-14, 16, 18 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mamer et al., Job Completion Based Inventory Systems: Optimal Policies For Repair Kits and Spare Machines (1985) as applied to claims 1, 4-11, 17, 19-23 and 25-27 above and further in view of Patton et al., Service Management Principles and Practices (1994).

Regarding Claim 2 Mamer et al. teach a method for predicting repair parts in response to repair history (failure data) wherein the history is used to determine/define a plurality of job types (specific jobs/repairs based on the repair history; Paragraphs 1-4, Page 706; Last Paragraph, Page 717; Paragraph 1, Page 718).

Mamer et al. does not expressly teach identifying a set of symptoms associated with a product as claimed.

Patton et al. teach identifying a set of symptoms associated with a product (i.e. diagnostics, troubleshooting, predictive maintenance, etc.; Pages 130-33, 136-139; Paragraphs 4-5, Page 198; Last Paragraph, Page 1999; Figures 9-1, 9-7; Tables 7-1, 9-1) in an analogous art of service management for the purposes of ensuring that "A service technician dispatched to a specific location to repair a specific piece of equipment can know exactly what is to be repaired and exactly what tools, test equipment and parts to take along" (Last Paragraph, Page 199).

More generally Patton et al. teach a system and method for service management comprising:

- predicting parts for an onsite repair in response to a plurality of information including but not limited to service/repair history (service forecasting, predictive maintenance, etc.; Figure 5-1; Table 5-1; Pages 72-73; Paragraph 1, Page 139; Last Paragraph, Page 163; "A good support system proactively determines what parts will probably be required and delivers those parts to meet the technician.", Paragraph 1, Page 198; Figures 9-1, 9-7; Tables 9-1, 9-2);

- utilizes averages when analyzing time series data ("Moving averages are better for time series analysis than are single point estimates", Paragraph 2, Page 73);

- parts inventory management based on repair history (part usage, failure probabilities, etc.) and other service data (Pages 146-148);

- service call management ("The call management organization acts as the heart of the service operation function. Its purpose is to validate customer status, determine the real customer needs, assign priorities and pass the call to the person best qualified to help the caller.", Paragraphs 4-5, Page 198);

- configuration management ("the service organization is completely aware of the exact configuration of each piece of equipment required to service. A service technician dispatched to a specific location to repair a specific piece of equipment can know exactly what is to be repaired and exactly what tools, test equipment and parts to take along.", Last Paragraph, Page 199).

- capturing, storing, analyzing and reporting on a plurality part service data including but not limited to part usage repair costs, technician performance, product/equipment performance, preventive metrics and the like (parts per unit repair, no trouble found, actual vs. estimated, first call fix rate, callback rate, attempts per incident, call duration, etc.; Performance Measurement and Reporting, Pages 44-48, 50-51; Table 3-2; "Percentage of required parts on hand, equipment down waiting for parts and parts turnover rates are useful measures for individual technicians.", Last Paragraph, Page 51);

- flagging repairs/service information to indicate/alert users to one or more conditions/information (corrective maintenance, alerts, condition monitoring; Last Paragraph, Page 196; Paragraph 1, Page 197; Last Paragraph, Page 142; Figure 9.1);

- identifying training needs and providing individualized training based on observed/measure performance metrics (Pages 44-48; Last Paragraph, Page 117; Paragraph 2, Page 124); and

- automating service part management utilizing computers (information systems, apparatus, etc.; "Most service parts are low usage and are best forecast by humans with computerized historical data and information on expected market demand and technical supply.", Paragraph 1, Page 164; Information Systems, Pages 242-249).

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting the parts needed for a repair as taught by Mamer et al. would have benefited from identifying a set of symptoms associated with a product in

view of the teachings of Patton et al.; the resultant system/method enabling business to ensure that "A service technician dispatched to a specific location to repair a specific piece of equipment can know exactly what is to be repaired and exactly what tools, test equipment and parts to take along." (Patton et al.: Last Paragraph, Page 199).

Regarding Claims 3, 18 and 24 Mamer et al. teach a method for predicting parts necessary for a repair wherein the method determines an expected waste (cost, penalty, demand loss, back order, broken job, etc.) associated with the repair by analyzing the repair/service history of the product as well as determining a plurality of job/repair types based on the repair history, as discussed above.

Mamer et al. does not expressly teach an apparatus (system, computer) for implementing the method for predicting the parts necessary for a repair or determining the expected waste in response to the symptoms as claimed.

Patton et al. teach automating service part management utilizing computers (information systems, apparatus; Paragraph 1, Page 164; Information Systems, Pages 242-249) as well as analyzing symptoms (Pages 130-33, 136-139; Paragraphs 4-5, Page 198; Last Paragraph, Page 1999; Figures 9-1, 9-7; Tables 7-1, 9-1) to determine the parts necessary for a repair in an analogous art of service management for the purposes of ensuring that "A service technician dispatched to a specific location to

repair a specific piece of equipment can know exactly what is to be repaired and exactly what tools, test equipment and parts to take along" (Last Paragraph, Page 199).

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting the parts needed for a repair as taught by Mamer et al. would have benefited from using one or more computers/systems/apparatus to automate the parts prediction steps as well as benefited from utilizing well known diagnostic techniques/approaches to identify the parts needed for a service/repair based on product symptoms in view of the teachings of Patton et al. the resultant system/method enabling businesses to ensure that "A service technician dispatched to a specific location to repair a specific piece of equipment can know exactly what is to be repaired and exactly what tools, test equipment and parts to take along." (Patton et al.: Last Paragraph, Page 199).

Regarding Claim 12 Mamer et al. does not expressly that determining the parts further comprises selecting the parts for which training of call qualifiers is to be updated as claimed.

Patton et al. teach providing general and individualized training to a plurality of users (technicians, service center representatives, call qualifiers, etc.) based on a plurality of monitored human performance metrics (accuracy, completeness, response time, productive time, productivity, effectiveness, etc.) and test/examinations (Page 48;

Paragraph 2, Page 53; Service Training, Pages 117-125; Table 3-2) in an analogous art of service management for the purposes improving the users and business's performance as well as the customer's satisfaction (Paragraph 2, Page 53).

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting the parts needed for a repair as taught by Mamer et al. would have benefited from selecting the parts for which training of call qualifiers (i.e. identifying training requirements/opportunities) in view of the teachings of Patton et al. the resultant system/method improving the users and business's performance as well as the customer's satisfaction (Patton et al.: Paragraph 2, Page 53).

Regarding Claim 13 Mamer et al. does not expressly teach that determining the parts further comprises selecting the parts for which a flag is to be provided to call qualifiers (users, technicians, etc.) as claimed.

Patton et al. teach flagging repairs/service information to indicate/alert users to one or more service/repair conditions/information/needs (corrective maintenance, alerts, condition monitoring; Last Paragraph, Page 196; Paragraph 1, Page 197; Last Paragraph, Page 142; Figure 9.1) in an analogous art of service management for the purposes of alerting users to potential maintenance/service needs (Last Paragraph, Page 142; Paragraph 1, Page 143).

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting/optimizing parts needed for a repair as taught by Mamer et al. would have benefited from flagging/identifying parts/service requirements/needs to users in view of the teachings of Patton et al. the resultant system/method alerting users to potential maintenance/service needs (Patton et al.: Last Paragraph, Page 142; Paragraph 1, Page 143).

Regarding Claim 14 Mamer et al. teach a system and method for predicting repair parts wherein determining the parts further comprises selecting the parts which are to be stocked in a field kit as part of a tour of repairs (Paragraph 2, Page 703).

While Mamer et al. inherently teach a mode of transportation (foot, vehicle) as part of the field repair process Mamer et al. is silent on the specific mode of transporting (carrying) the parts needed for a repair (i.e. repair vehicle).

Official notice is taken that carrying/transporting service parts (tools, kits, items, components, supplies, materials, etc.) utilizing a repair vehicle (can, van, truck, etc.) is old and very well known and provides a convenient method for transporting the technician to/from the repair site.

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting/optimizing parts to be carried to a field repair as taught by

Mamer et al. would have benefited from having the technician utilize a vehicle to transport/carry the parts necessary for a repair in view of the teachings of official notice; the resultant system enabling the technician to conveniently carry heavy and/or bulky parts.

Regarding Claim 16 Mamer et al. does not expressly determining which personnel to target for additional training based on the expected wastes as claimed.

Patton et al. teach providing general and individualized (targeted) training to a plurality of users (technicians, service center representatives, call qualifiers, etc.) based on a plurality of monitored human performance metrics (accuracy, completeness, response time, productive time, productivity, effectiveness, etc.) and test/examinations (Page 48; Paragraph 2, Page 53; Service Training, Pages 117-125; Table 3-2) in an analogous art of service management for the purposes improving the users and business's performance as well as the customer's satisfaction (Paragraph 2, Page 53).

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting the parts needed for a repair as taught by Mamer et al. would have benefited from selecting the parts for which training of call qualifiers (i.e. identifying training requirements/opportunities) in view of the teachings of Patton et al. the resultant system/method improving the users and business's performance as well as the customer's satisfaction (Patton et al.: Paragraph 2, Page 53).

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mamer et al., Job Completion Based Inventory Systems: Optimal Policies For Repair Kits and Spare Machines (1985) in view of Patton et al., Service Management Principles and Practices (1994) as applied to claims 1-14 and 16-27 above and further in view of Glovitz et al., U.S. Patent No. 5,862,421.

Regarding Claim 15 Mamer et al. teach a system and method for predicting repair parts further comprises determining which parts are least desirable to support (carry) based on the expected wastes (parts preference ordering/ ranking; Paragraphs 1 and 4-5, Page 708; Last Paragraph, Page 711; Equation 3.3; Tables 1-2).

Neither Mamer et al. nor Patton et al. expressly teach determining which products are least desirable to support based on the expected wastes as claimed.

Glovitz et al. inherently teach determining which products are no longer desirable to support wherein the system determines the reliability and/or profitability of equipment (product, item, etc.) utilizing information collected during the repair process, in an analogous art of service/repair management (i.e. unprofitable and/or unreliable products being inherently undesirable to keep/support; Column 1, Lines 50-61).

More generally Glovitz et al. teach a method and system for managing the repair of field equipment wherein service requests are made/received, technicians are

assigned/dispatched and repairs are made/completed (Abstract; Column 1, Lines 29-61) comprising:

- identifying a set of symptoms (failure type/mode, nature of the malfunction, etc.) for the purposes of accepting and appropriately assigning service requests based on the symptoms, technician skill level and other factors (nature of the repair/failure; Column 1, Lines 41-60; Column 2, Lines 42-53; Column 10, Lines 36-44; Column 14, Lines 20-25; Table 1, Fields 5 and 27-28);

- analyzing a repair history for the product (item, equipment, etc.) for the purposes of diagnosing (classifying, qualifying, understanding, etc.) the nature of the service/repair request (Column 1, Lines 41-60; Column 2, Lines 42-53; Column 10, Lines 36-44; Column 14, Lines 20-25; Table 1, Fields 5 and 27-28);

- tracking and controlling the inventory of repair parts, specifically the tracking of used repair parts for billing and other purposes; and

- utilizing service/repair information (call records, parts used, etc.) to evaluate the performance of technicians ("Data collected for inventory usage and service of specific copiers may be used to evaluate equipment reliability and profitability. The data may also be used to evaluate a technician's performance.", Column 1, Lines 50-61).

It would have been obvious to one skilled in the art at the time of the invention that the method for predicting/optimizing the parts needed for a repair, with its ability to identify parts which are not desirable/optimal to stock/carry, as taught by the combination of Mamer et al. and Patton et al. would have benefited from determining

the profitability and/or reliability of the products being repaired in view of the teachings of Glovitz et al.; the resultant system enabling users to minimize costs by eliminating parts/products that are no longer desirable to stock/carry/support (Glovitz et al.: Column 1, Lines 50-61).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Aragones et al., U.S. Patent No. 6,832,205, teach a system and method for predicting the timing and cost of service events (repairs) during the lifecycle of a product. Aragones et al. further teach the well-known use of historical service/repair data to predict future repairs/service.

- Ricoh Co. Ltd., JP 2003067162 A, teaches a system and method for predicting the parts necessary for a repair in response to service call information and the product's repair history.

- Servigistics Delivers First Web-based Service Planning and Forecasting Solution (2000) teaches a commercially available system and method for predicting the parts needed for a repair ("AutoPilot uses part/location groups to manage parts by exception with predetermined rounding rules, forecasting methods, and critical shortage and excess thresholds").

- Xelus to Add Field-Based Planning To Compaq's Service Supply Chain (2001) teaches Compaq's utilization of commercial software, for four years, that enables "inventory planning and forecasting, online sourcing and procurement, and business process optimization" wherein the system/method employs "probabilistic forecasting techniques to account for the sporadic demands at field locations."

- Krizner, Ken, Solution takes control of parts inventory levels (2001) teaches a system and method for planning and managing service parts wherein the system forecasts/predicts parts necessary for repairs in order to minimize waste (minimize inventory costs).

- Servigistics Announces Parts Plan 6.0 (2001) teaches a system and method for service parts planning and management wherein the system/method forecasts (predicts) service parts necessary for repairs/service/maintenance in order to minimize expected waste (e.g. minimize expedited part orders).

- Terry, Lisa, The Forgotten Supply Chain: Service Parts (2001) teaches several commercial systems/methods for planning and managing service parts wherein the systems/methods include parts/service forecasting, planning inventory management, call center management, work order management, resource scheduling and cost management capabilities. Terry further teaches Hewlett-Packard's used of Xelus's suite of service management products to plan and manage service parts.

- Xelus.com Web Pages (2001) teaches a commercially available system and method for managing "service pars inventory along with repair, maintenance and overhaul operations" wherein the system/method ensures "having the right part, at the right place, at the right time."

- Graves, Stephen, A Multiple-Item Inventory Model with A Job Completion Criteria (1982) teaches a method for predicting the parts necessary for an onsite repair wherein the method determines "the optimal mix of components to be carried by a service representative in order to achieve the desired job completion rate." Graves further teaches that the method includes predicting which parts need to be placed (i.e. probability that a component has failed), probability of not having the right part (i.e. parts not sent to the repair), inventory costs as well as penalty costs for not completing the repair/job on the first visit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott L. Jarrett whose telephone number is (571) 272-7033. The examiner can normally be reached on Monday-Friday, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hafiz Tariq can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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